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## RACE IN THE PACIFIC AREA, WITH SPECIAL REFERENCE TO THE ORIGIN OF THE AMERICAN INDIANS: ANTIQUITY OF OCCUPATION

By GEORGE GRANT MacCURDY

THE Pacific washes the shores of both the Old World and the New; hence the Pacific area is a large one. It is at least indirectly in connection with the birthplace of man, for it is accessible from all the great land masses. Whether the American or Asiatic portion of this area was first occupied by man is a question of wide interest. An answer to this question would be of help in locating the spot, if indeed it was a single one, from which man has spread over the face of the earth.

Physically man is a vertebrate and belongs to the great class of so-called Mammalia. We may differentiate still further and place man in one of the families composing the Order of Primates, which includes not only the *Simiidae* but also the lemurs. Eocene lemurs are found in both the western (Puerco beds of North America) and eastern hemispheres. The *Simiidae*, however, the family most nearly approaching man in physical structure, all belong to the Old World: the gorilla and chimpanzee to Africa, and the orang and gibbon to the Far East. The presumption is strong, therefore, that the human race also originated in the Old World.

Structurally, Europe is the keystone of the Old World arch—still firmly planted against Asia and once in more intimate contact with Africa than at present. On this account it is not surprising that the beginnings of things human, so far as we have been able to trace them, have had their fullest exemplification in Europe. Asia and Africa have not been so thoroughly explored, prehistorically speaking, as has Europe. Both are full of archeological possibilities. Darwin looked with favor on Africa as the place where man might have originated because of its being the present home of the gorilla and chimpanzee. Moreover *Propliopithecus*, a fossil

ape recently discovered in the Oligocene of Egypt, seems to be the ancestor not only of all Simiidae but also of *Hominidae*. But Africa is not a part of the Pacific area. If it was the original home of man, his arrival in the western hemisphere was relatively late.

The superficial resemblance between the archaic Neandertal race and modern Australians led Schötensack to the belief that Australia was the first home of man. Such a view is untenable for several reasons. In the first place Australia, like Patagonia and Madagascar, belongs to an early Tertiary southern land mass, where beginning with the Miocene epoch, mammalian evolution came almost to a standstill. Again the resemblance of modern Australians to *Homo neandertalensis* is more fancied than real. The architecture of the skull is quite different; the Neandertal face is long, while the Australian face is short. The Australian limb bones are long and light, those of the Neandertal race are short and stocky; and other minor differences might be noted.

In discussing Asia's claims one naturally thinks first of the fact that it is not only the home of the orang-utan and the gibbon, but also of *Pithecanthropus erectus*. In this connection it is well to recall the main features of Klaatsch's theory. He compared certain early types of man with certain anthropoids, and found that the differences between the gorilla and the orang-utan are in a measure parallel to those between the man of Neandertal and the later type of Aurignac. On this as a basis two lines of human descent are postulated. One goes back to an ancestor in Africa, common to the gorilla and *Homo neandertalensis*; the other to an ancestor in Asia, common to the orang-utan and *Homo aurignacensis*. These two types met and mingled in Europe, producing a new type that was dominant at the close of the Paleolithic period. The Klaatsch hypothesis has met with a rather cold reception, especially at the hands of Professor Keith, who is especially fitted to expose its weaknesses on account of his familiarity with the anatomy of the orang.

To the Pacific area belongs the well-known fossil ape man from Java, *Pithecanthropus erectus*, which according to the associated fauna and flora is of lower Pleistocene age. Owing to the frag-

mentary nature not only of the *Pithecanthropus* remains but also of available collateral evidence, three rather distinct views are still held as to the status of the Java specimen. In the first place there are those who with Dubois believe it to represent a transition form between man and the higher apes, and to be in a sense the precursor of man; in other words a creature that had won for itself the erect posture, but whose brain was still too primitive to be called the brain of *Homo*.

Then there are those, who like Professor Keith, believe the name given by Dubois to be justified in a zoölogical sense; but who, seeing so many human characters, would go a step farther and call it *Homo javanensis*. For them the human line of descent would lead directly to and through *Pithecanthropus* on its way back to the parent trunk.

Lastly, there are those who believe that *Homo* and *Pithecanthropus* go back to a common ancestor, but that they represent different limbs of the parent trunk. Viewed in this light *Pithecanthropus* would have no living lineal descendant.

The Selenka Trinil Expedition of 1907-08, one of whose results was to reduce the age of the *Pithecanthropus* remains from Pliocene to lower Pleistocene, secured a tooth that is said by Dr Walkoff to be definitely human. It is a third lower molar found not at the Trinil site but in a neighboring stream bed and in deposits older (Pliocene) than those in which *Pithecanthropus* occurred. Should this prove to be the case, *Pithecanthropus* could no longer be regarded as a precursor of man; it would give us instead the cross-section of a different limb of the Primate tree from the limb whose branches represent the various types of *Hominidae*.

The principal event of the Australian meeting of the British Association for the Advancement of Science one year ago was the presentation of a fossilized human skull from Darling Downs on the border between New South Wales and Queensland. Unfortunately, this specimen was not found *in situ*; but is in the same state of fossilization as are the remains of extinct animal species from the same locality. The latter are said to be of Pleistocene age. The "solidly fossilized" human skull (that of a youth) is

evidently not of the Neandertal type; nevertheless the authorities present were of the opinion that it represents an extremely primitive type. When archeologists become thoroughly awake to the possibilities of China a new chapter in the antiquity of occupation of the Pacific area will in all probability be recorded.

Passing to the American Pacific shores a good deal has already been accomplished, especially in California; but the results do not point to a great antiquity of occupation. Man probably entered the Americas by way of Bering strait after the final retreat of the last maximum glaciation. Bearing directly on this point is the discovery in 1912 by Dr Hrdlička of vestiges of an ancient population in northeastern Asia persisting there perhaps since late Paleolithic times, and which possibly gave rise to the American Indian. This is in line with the results of the Jesup North Pacific Expedition, and future archeological discoveries may confidently be expected to support the same point of view. As a seat of human occupation therefore, China probably antedates Mexico and Peru.

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